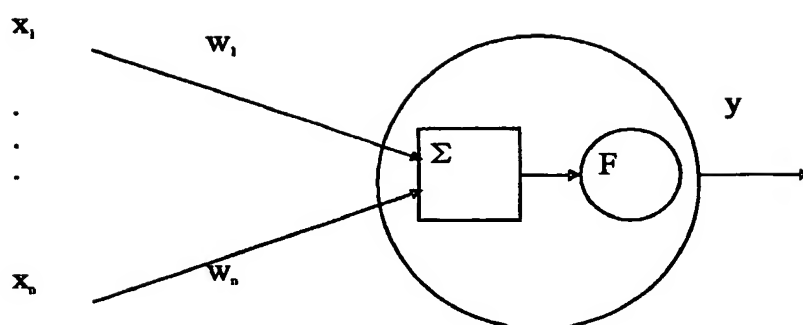**1/12**

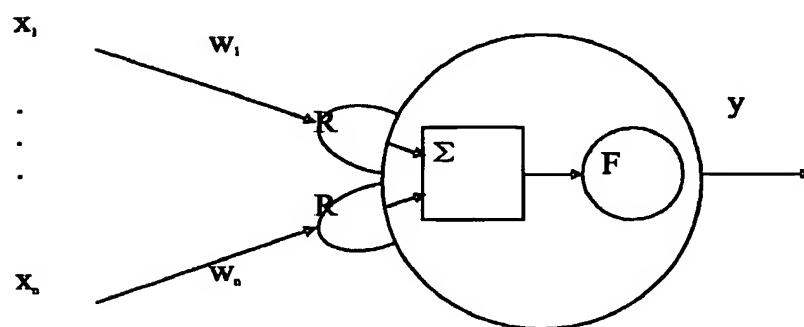Figure 1 – Conceptual processing in classical networks
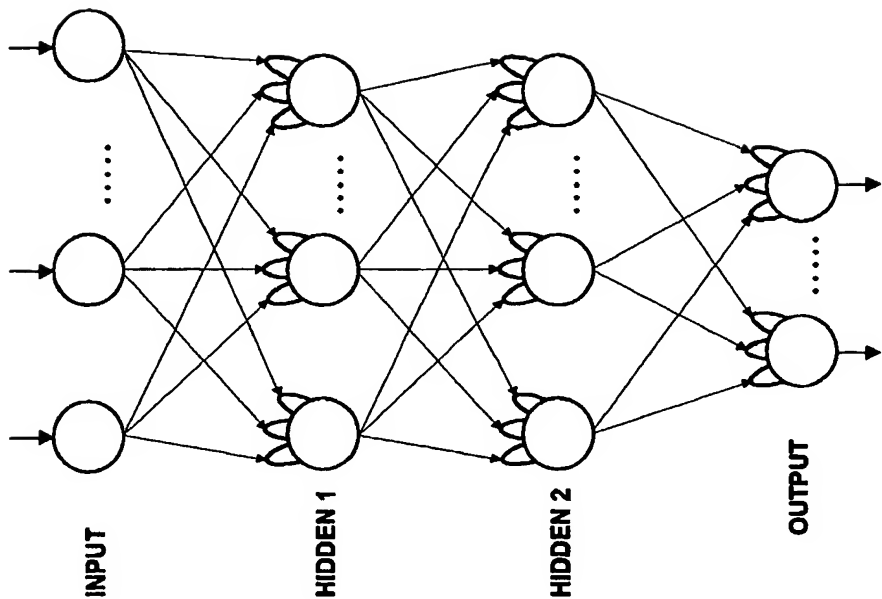

Figure 2 - Conceptual processing in classical Sine Net networks

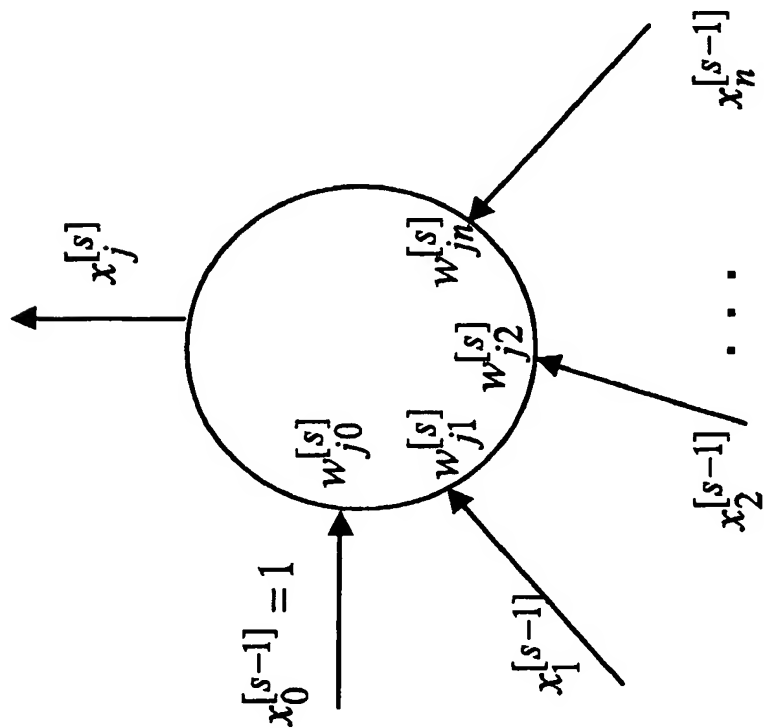Figure 4 – Representation of a multi-layer Sine Net
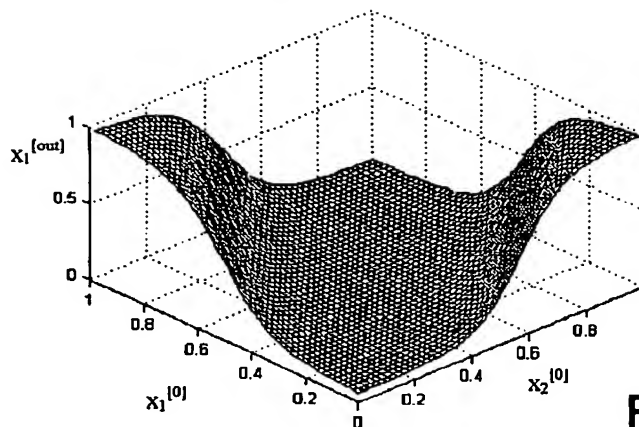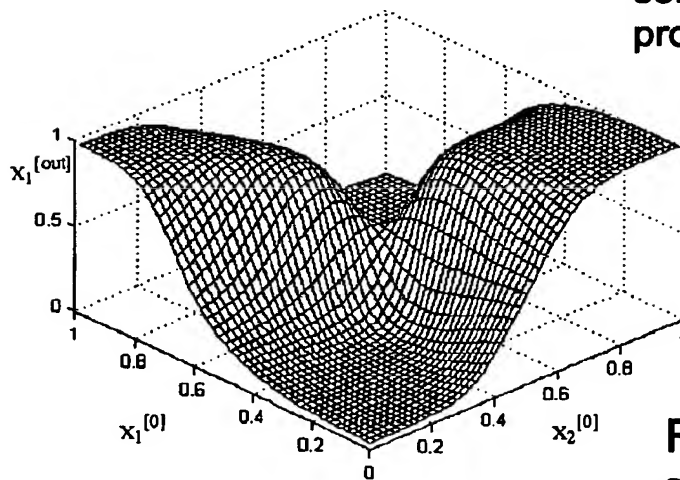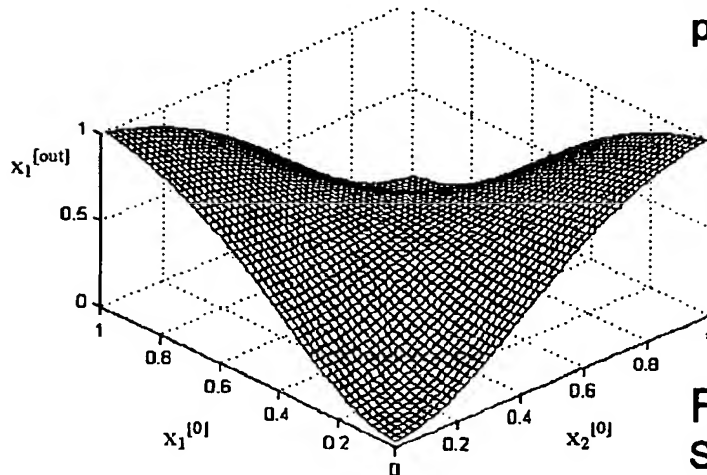

Figure 3 – Node variables for the *j-th* node

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Figure 5 – BP
solution of XOR
problem

Figure 6 – RBF
solution of XOR
problem

Figure 7 –
SN solution of
XOR problem.

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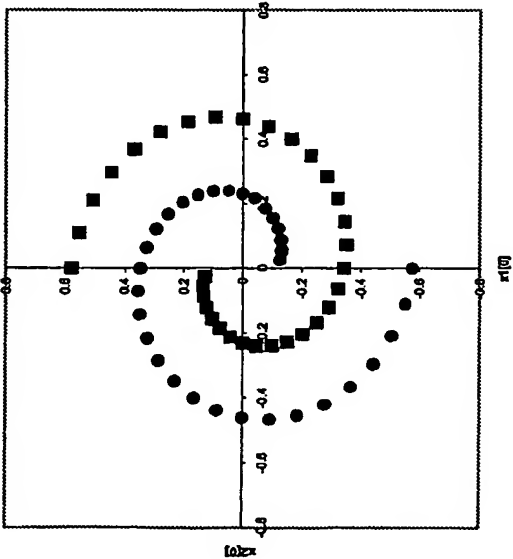Figure 10 – Back-propagation solution of the two spirals problem.
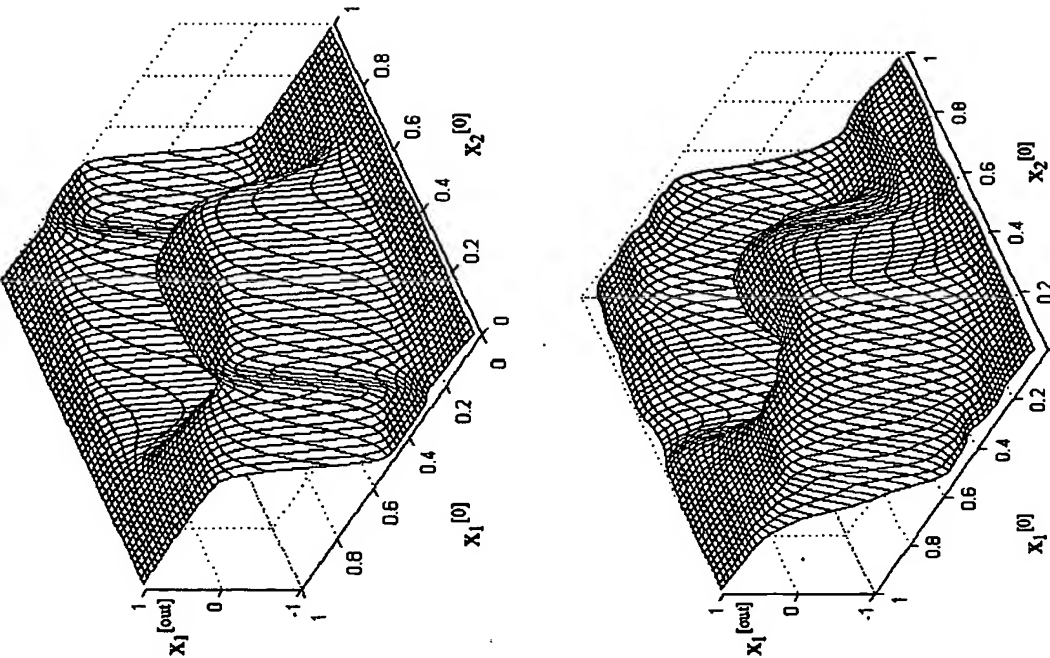
Figure 9 – Sine Network solution of the two spirals problem.

Figure 8 – The two spirals problem.

Fig. 11b – SN solution of Spiral problem with weights range (-π, π)

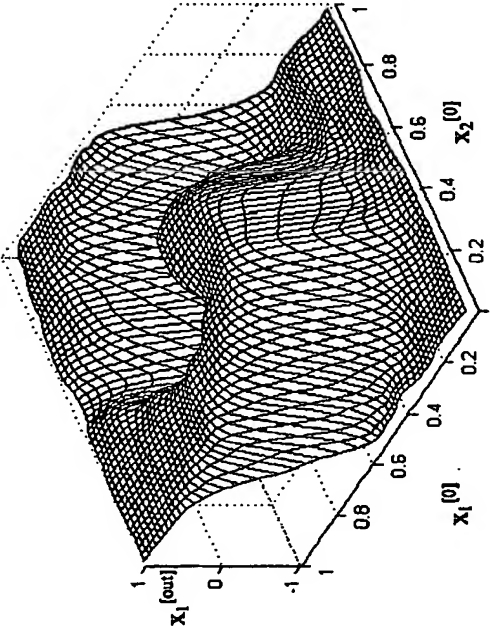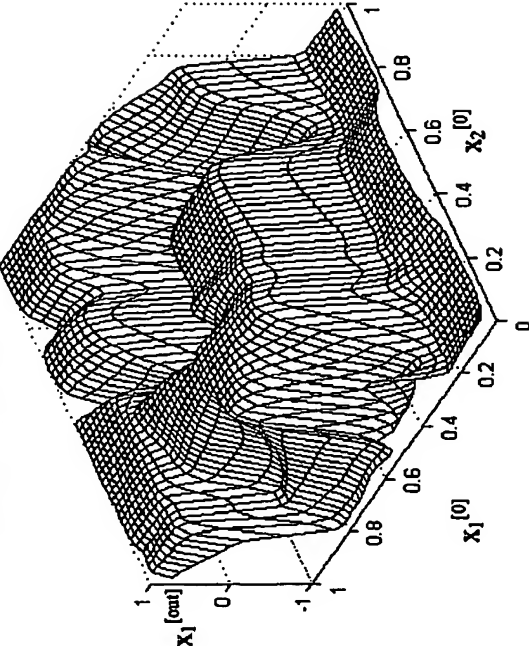Fig. 11d – SN solution of Spiral problem with weight range (-20,20)

Fig. 11a – SN solution of Spiral problem with weight range (-1,1)

Figure 11c – SN solution of Spiral problem with weight range(-10,10)

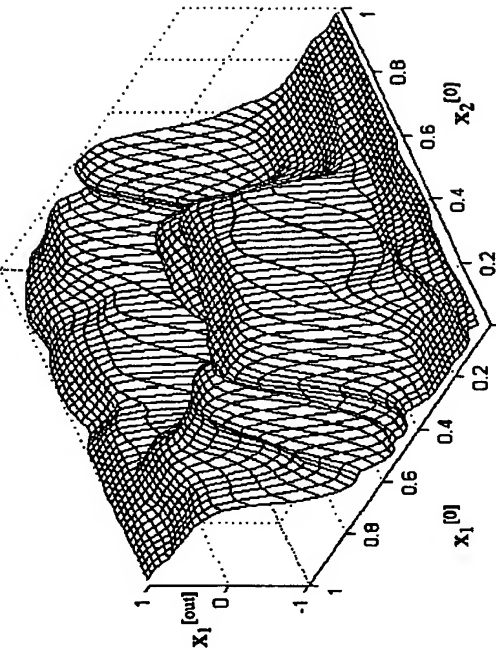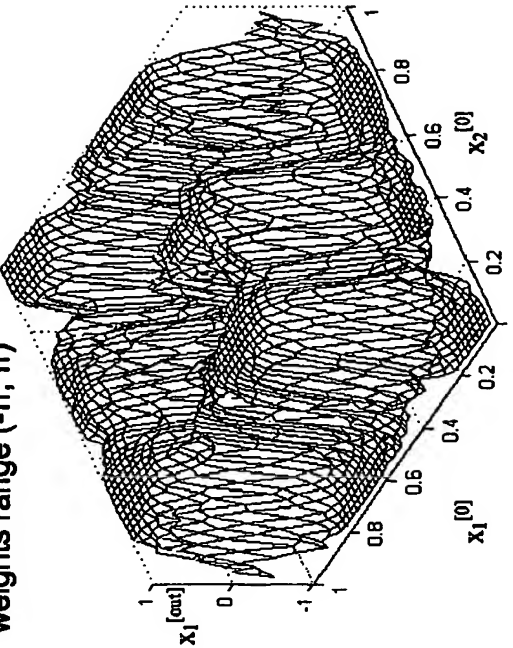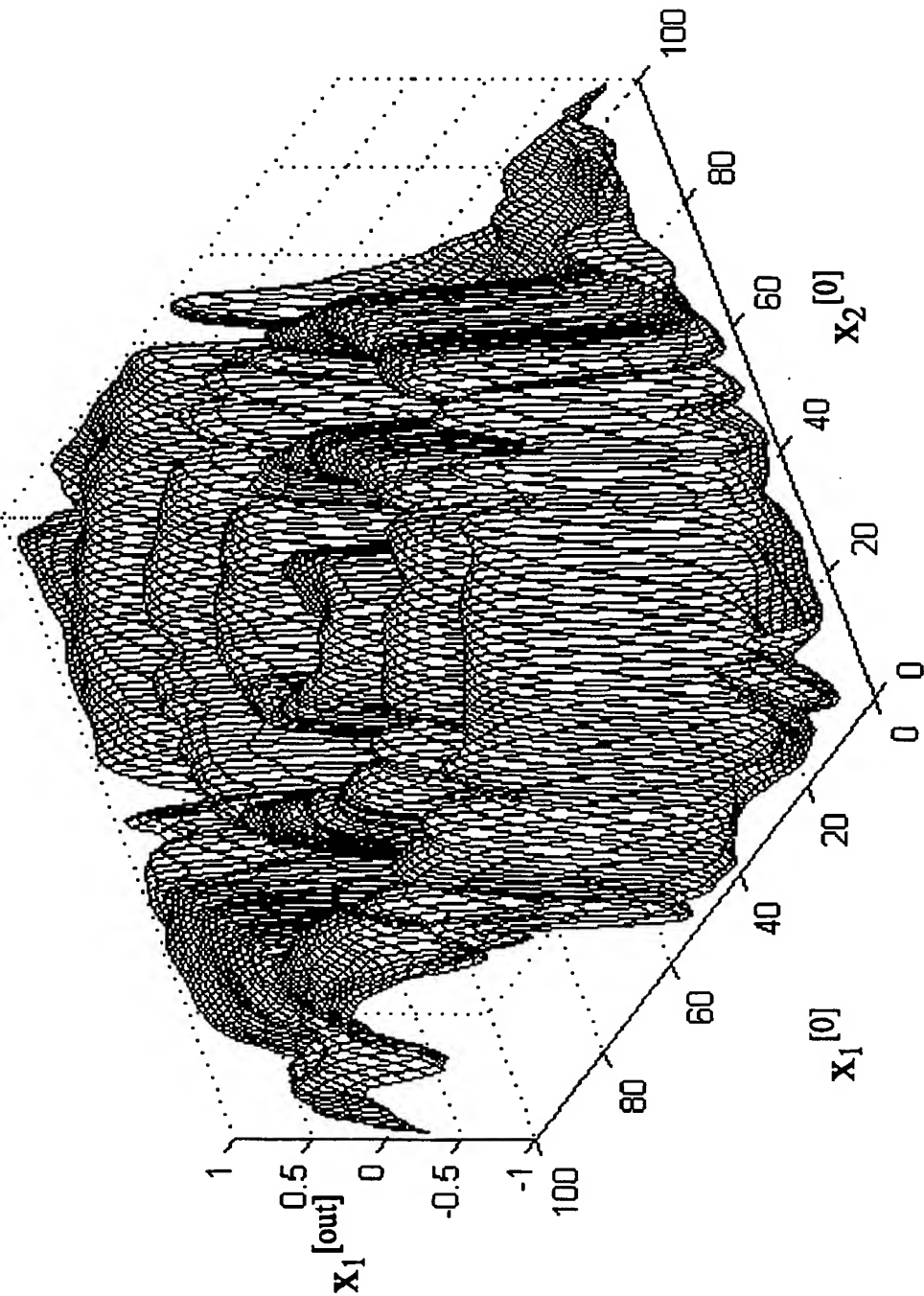Figure 12 – Solution of Sine Net on spiral problem with 192 points.
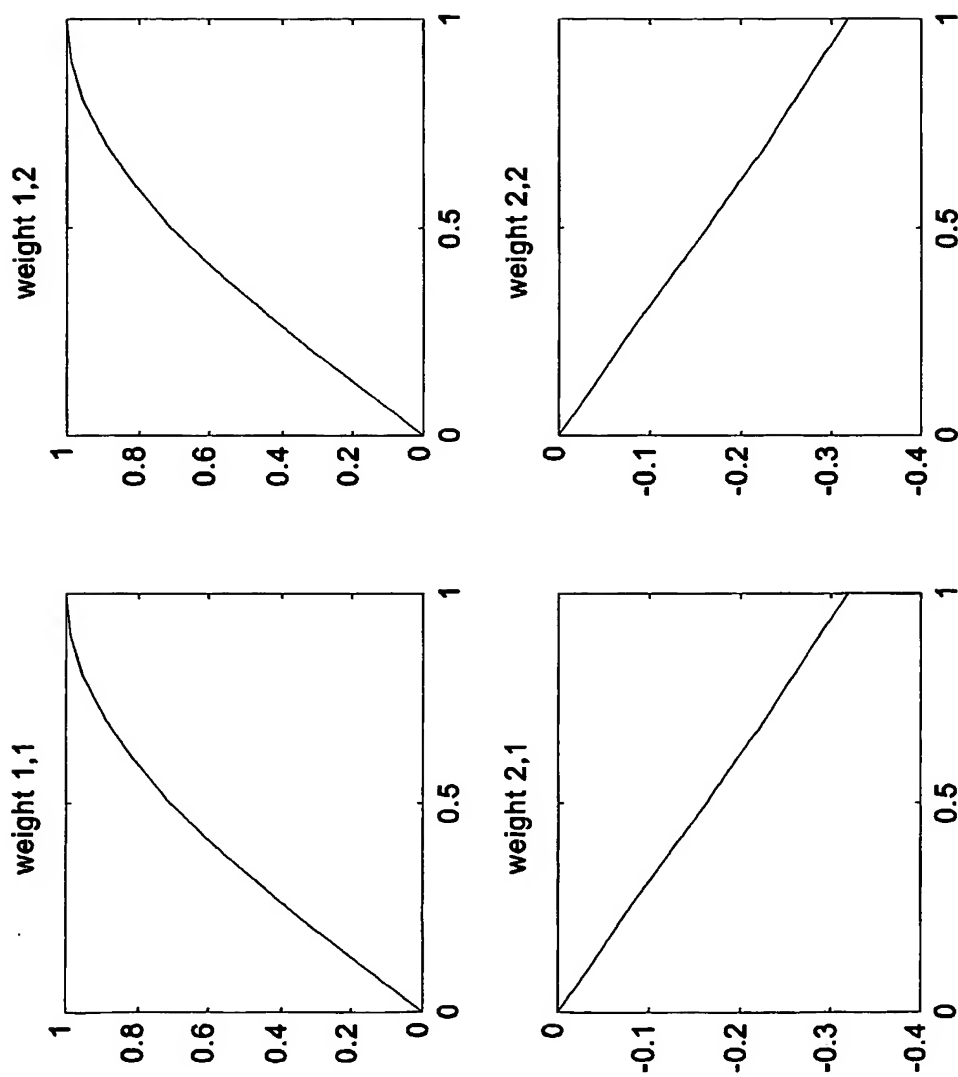
Figure 13 – SN weight transfer function from input to hidden nodes

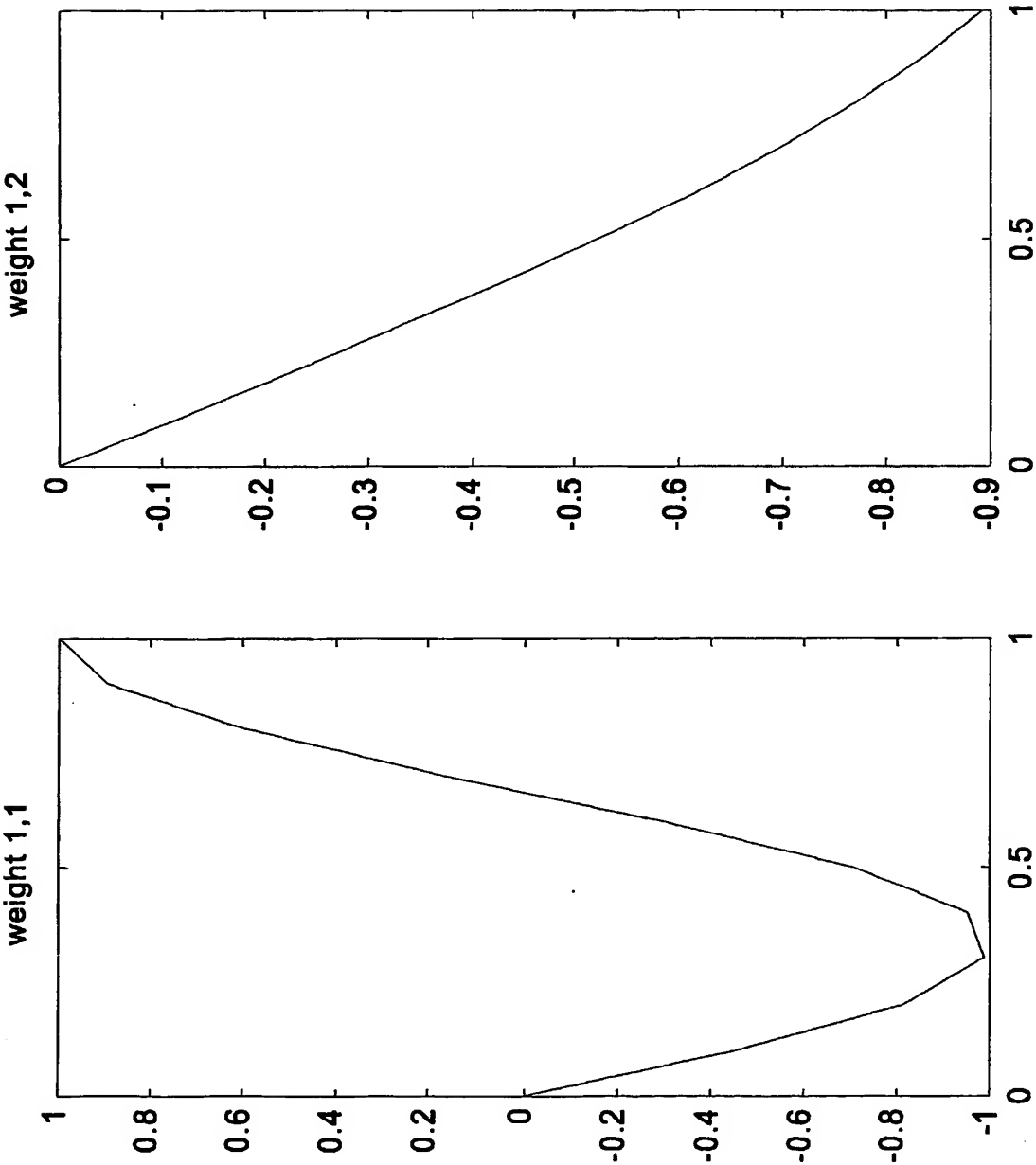Figure 14 – SN_weight transfer function from hidden to output nodes
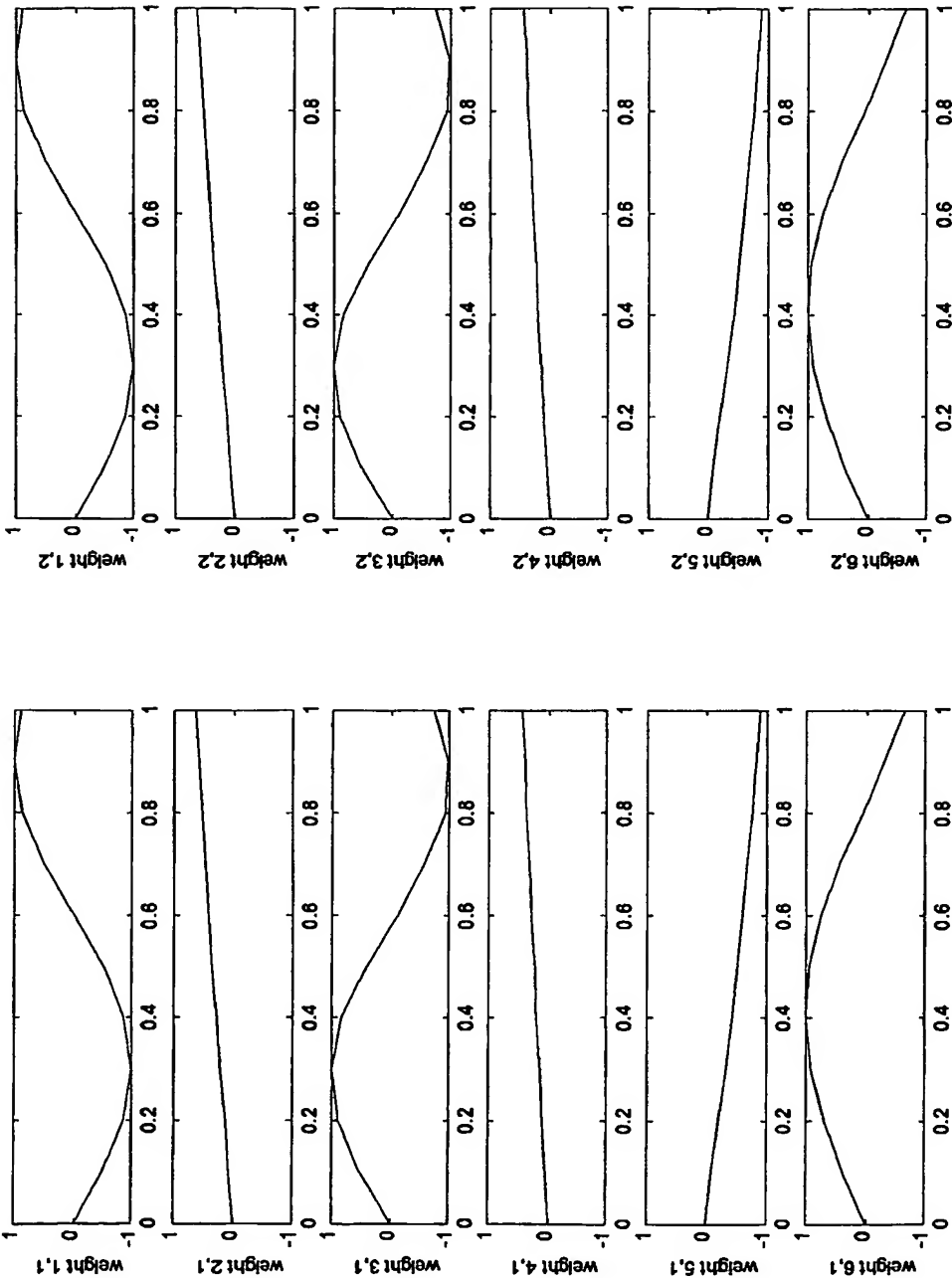
Figure 15 – SN weight transfer function from input to hidden nodes
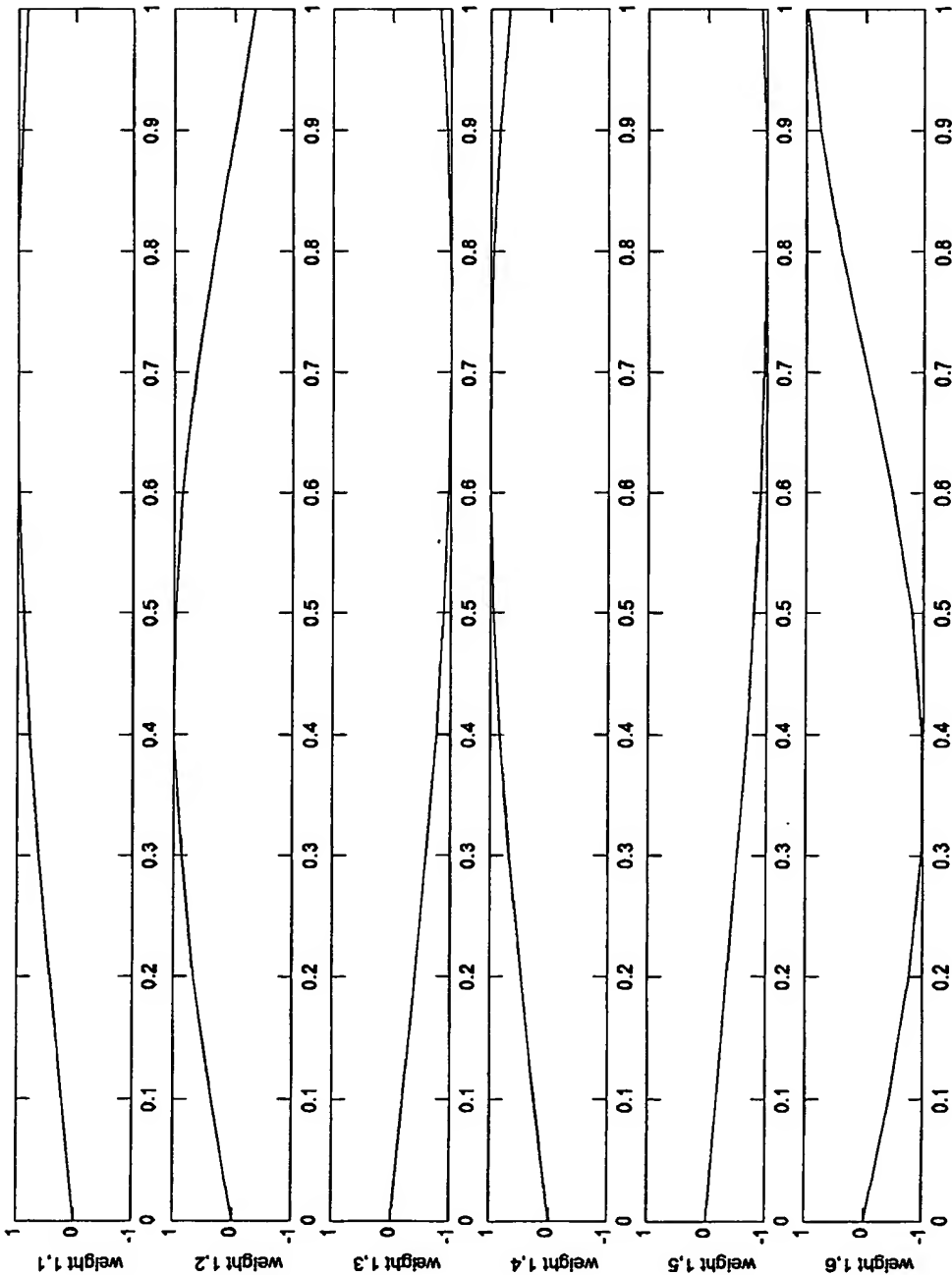
Figure 16 – SN weight transfer function from hidden to output nodes

Figure 17 – Comparison between Bp and SN network during the first trial, correctness on hidden units number

Figure 18 – Result Comparison between BP and SN on the Breast Cancer dataset.

Figure 19 – Result Comparison between BP and SN on the Breast Cancer dataset using "Early Stopping"
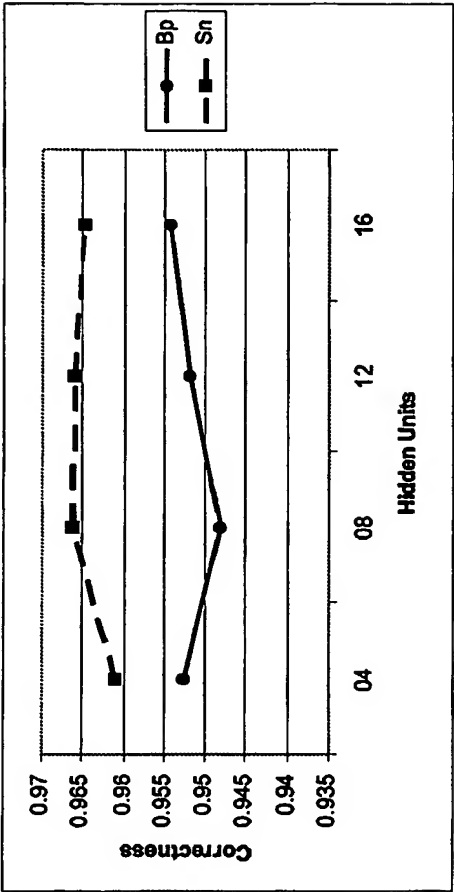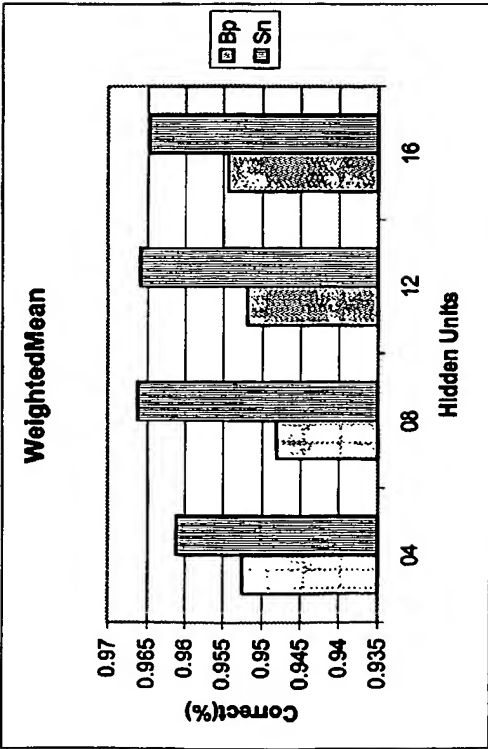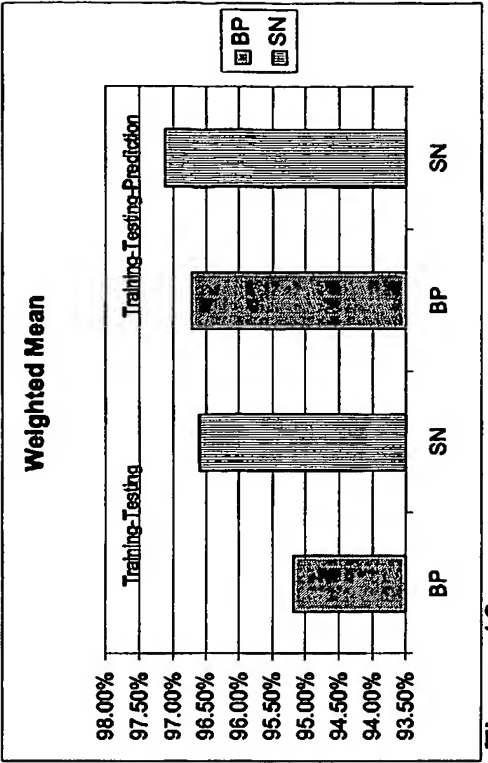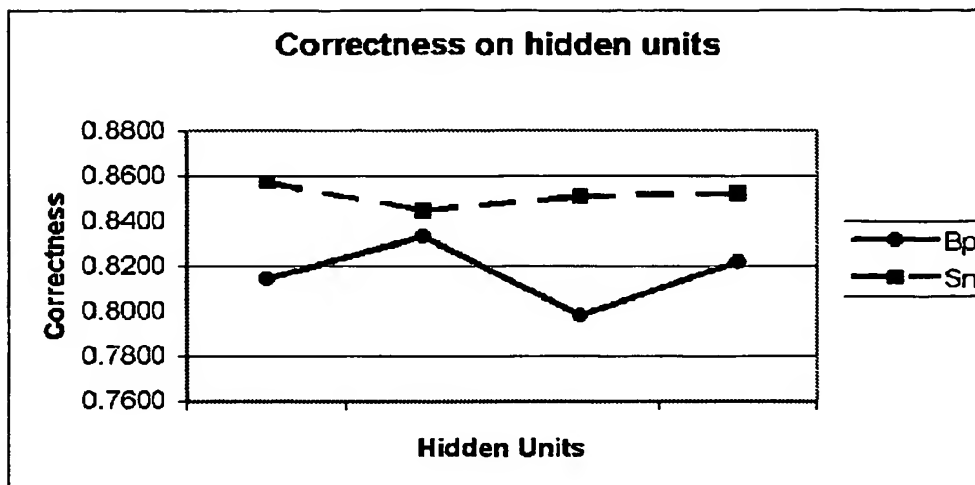
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Figure 20 – Comparison between Bp and SN network during the first trial,
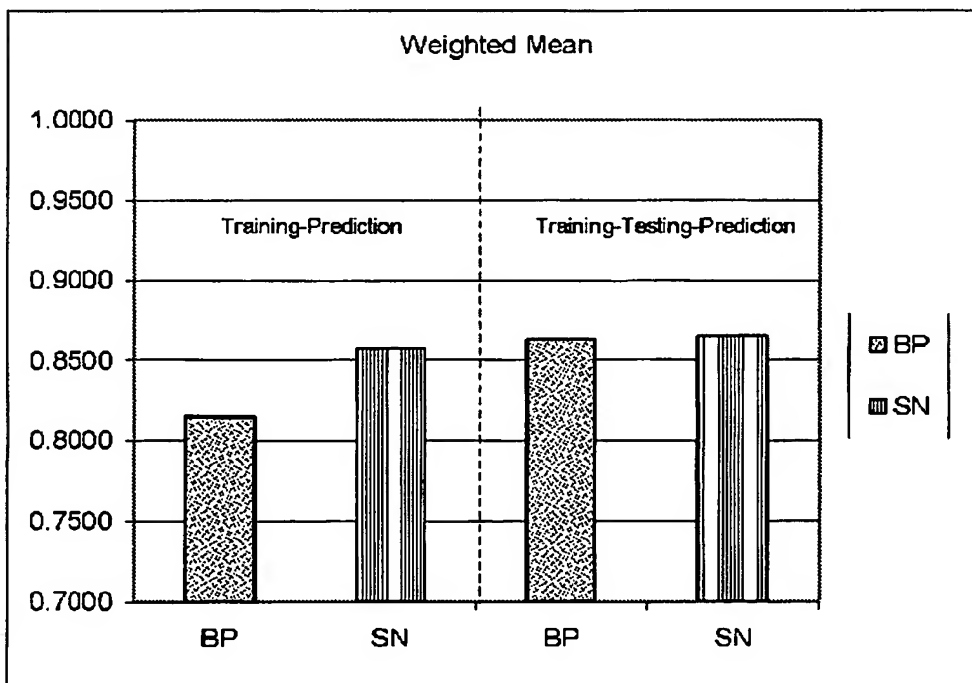correctness on hidden units number

Figure 21 – Result Comparison between BP and SN on the Australian
Credit Scoring dataset, with "Early Stopping" (Tr-Ts-Pr) and without (Tr-Pr)